

Contract No.: EP-W-09-002
WA #: 077-RSBD-02MV

Region 2 RAC2 Remedial Action Contract

Field Oversight Report No. 2

Pierson's Creek Site
Remedial Investigation/ Feasibility
Study Oversight
Newark, New Jersey

January 11, 2019

**CDM
Smith**

**Pierson's Creek Superfund Site, OU2
Remedial Investigation/Feasibility Study Oversight
Field Oversight Report 2
December 17, 2018 – January 4, 2019**

This field oversight report summarizes oversight of the field activities performed between December 17, 2018 and January 4, 2019 by Geosyntec Consultants (Geosyntec) at the Pierson's Creek Superfund Site Operable Unit 2 in Newark, New Jersey. CDM Smith was onsite for 5 of the 11 working days performing oversight of the Remedial Investigation/Feasibility Study field activities. CDM Smith performed oversight of the above field activities as described in the CDM Smith Final QAPP (July 2018). Specific details of activities observed are included below and in the following attachments:

- **Attachment I:** Table summarizing the split samples collected to date.
- **Attachment II:** Daily quality control reports (DQCRs) submitted between December 17, 2018 and January 4, 2019 summarizing daily field oversight activities. The DQCRs provide additional details for oversight activities performed by CDM Smith.
- **Attachment III:** Photos taken between December 17, 2018 and January 4, 2019 showing daily field and sampling activities.

Personnel Onsite

EPA

Pamela Tames (12/19)

Rachel Griffith (12/19)

CDM Smith

Emily Wong (12/19, 12/20, 1/4)

Jeff Rakowski (12/17, 12/27)

Troy Chemical

Bill Reilly (intermittently to coordinate access)

Geosyntec (personnel on days CDM Smith was onsite)

Rachel Gross (12/27, 1/4)

Doug Mateas (12/17, 12/19, 12/20)

Matt Mray (12/17)

Laura Pasquine (12/17, 12/19, 12/20)

Jessica Evans (12/27)

Trevor Murray (12/27)

Emily Ockert (1/4)

Summit Drilling (present on days CDM Smith was onsite)

(12/17, 12/20)

Field Activities Observed During this Reporting Period:

- Supplemental Soil Boring Sampling (12/17/18)
- Monitoring Well Development and Sampling (12/19/18, 12/20/18, 12/27/18, 1/4/19)
- Well Repair (12/20)

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Supplemental Soil Boring Sampling (12/17/18)

Summary of Events:

Oversight of supplemental soil boring installation was conducted at Pierson's Creek, OU2 on 12/17/18. At each sample location, concrete was cored or jackhammered from the surface prior to beginning boring advancement. A hand-auger was used to collect soils from the upper portion of each borehole until refusal was encountered. Once the hand auger met refusal, Geoprobe macrocores were advanced to the base of each borehole. Multiple boreholes were often attempted at each location in order to hand-auger as deep as possible to avoid buried utilities, before attempting to drill to depth.

CDM Smith observed sampling at GS-B-102 and GS-B-111 during this reporting period. Previously, it was incorrectly believed that supplemental soil boring sampling had been completed. However, with the completion of these two remaining borings all thirteen of the originally proposed locations have now been collected. One additional soil boring location is planned for the access road on the northern side of Troy Chemical property, at the location of the former culvert. The schedule for this boring is to be determined based on access to road.

Split Samples accepted:

A total of two soil boring split samples were accepted and are summarized on Attachment I – Split Sample Summary:

- The following split samples were accepted and sent to ChemTech Laboratories (ChemTech) for target compound list (TCL) semi-volatile organic compounds (SVOCs), polychlorinated biphenyl (PCBs) as Aroclors, and target analyte list (TAL) metals plus mercury analyses: GS-B-102-001-CDM, GS-B-102-002-CDM, GS-B-111-001-CDM.
- The following split samples were accepted and sent to ChemTech for TCL volatile organic compound (VOCs) analysis: GS-B-102-004-CDM, GS-B-111-004-CDM.

Significant Observations/Deviations:

- Geosyntec opted to collect their VOC samples based on visual observations (staining, fill) even when the PID recorded organic vapors were higher elsewhere in the interval. Section 4.2.2 (Supplemental Soil Boring Sampling) of the Geosyntec RI/FS workplan states the following which gives them some flexibility for selection of VOC sample intervals:

"Samples will generally be collected over 2-foot intervals, which will be selected based on visual observations and PID field screening results for VOCs only. One of the samples will be collected within the top two feet since facility workers are more likely to have direct contact with this interval. The second sample will be collected based on visual observation. In cases where obvious staining is not apparent, sample intervals will be biased toward historically high concentration intervals. The third sample will be collected within the top two feet of the meadow mat stratum to characterize it, if encountered."

The observation above represents a change in focus, but it is not considered to be a deviation from the work plan or QAPP.

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Monitoring Well Development, Sampling, and Synoptic Water Levels (12/19/18, 12/20/18, 12/27/18, 1/4/19)

Summary of Events:

Oversight of monitoring well development and sampling was conducted on 12/19/18, 12/20/18, 12/27/18, and 1/4/19.

Monitoring Well Development: Newly installed monitoring wells were developed using a submersible pump and existing shallow monitoring wells were purged with a bladder pump until water quality parameters stabilized. Low-flow purge rates were observed during purging and sample collection to ensure minimal drawdown. During development and purging, water quality readings were collected for conductivity, pH, temperature, dissolved oxygen, water level, oxidation-reduction potential, and turbidity measurements. Measurements were taken approximately every 5 minutes and recorded on a purge log until parameters met stabilization criteria for 3 consecutive readings. After parameters were stable at a well, development would be considered complete. CDM Smith observed monitoring well development at GS-MW-102

Monitoring Well Sampling: Monitoring wells were purged and sampled using low-flow sampling procedures. During purging water quality parameters were monitored and once stable groundwater samples were collected. Fourteen monitoring well (four new, 10 existing) groundwater samples were collected for VOCs, SVOCs, PCBs as Aroclors, pesticides, dissolved metals, and total and dissolved mercury. Monitoring well sample collection was observed by CDM Smith at MW-2, MW-3, MW-7, MW-9, MW-10, MW-13, MW-17, GS-MW-102, GS-MW-103, and GS-MW-104. All newly installed shallow monitoring wells and previously installed monitoring wells have been sampled. Three intermediate and one deep well are yet to be installed and sampled.

Synoptic Water Levels: Oversight of synoptic water level measurements from monitoring wells was conducted on 1/4/19. Following the completion of monitoring well sampling, a round of synoptic water levels was collected on all new and existing monitoring wells. Water level measurements were collected from a marked point, on the inner casing, from each monitoring well using a water level meter. The water level meter was cleaned using soap and DI water after each measurement. All monitoring wells were measured during synoptic water level collection. According to Geosyntec an additional round of synoptic water levels will be collected once all monitoring wells have been installed and sampled.

Split Samples accepted:

A total of two groundwater samples were accepted and are summarized on Attachment I:

- The following split samples were accepted and sent to ChemTech for TCL VOCs, SVOCs, PCBs as Aroclors, pesticides, and TAL dissolved metals plus mercury analyses: MW-10-CDM and MW-17-CDM.

Significant Observations/Deviations:

- Total mercury groundwater samples were collected from each monitoring well location as an additional sample as directed by Chris Greene of Geosyntec despite not being listed in the work plan and the QAPP.

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Well Repair (12/20/18)

Summary of Events:

Oversight of monitoring well inspection and repair was conducted at Pierson's Creek, OU2 on 12/20/18. A visual inspection of the MW-1 and MW-17 monitoring wells identified cracked or corroded upper portions of the well casings, broken or missing well caps, and settling and cracking of well pads. Both wells were repaired to maintain the structural integrity of the monitoring wells. All monitoring well repairs have been completed.

Attachment I

Split Sample Collection Summary

December 17, 2018 – December 28, 2018

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Newark, New Jersey

Attachment I
Split Sample Collection Summary
December 17, 2018 – January 4, 2019
Pierson's Creek Superfund Site, OU2
Remedial Investigation/Feasibility Study Oversight
Newark, New Jersey

Sample ID	Sample Matrix	Depth (feet bgs)	Date Collected	Parameters Collected	Notes
GS-SS-101-001-CDM	Soil	0-0.5	12/4/2018	Aroclors, SVOCs, and metals + Hg	-
GS-SS-101-002-CDM	Soil	0.5-0.75	12/4/2018	Aroclors, SVOCs, and metals + Hg	-
GS-SS-101-003-CDM	Soil	0.5-0.75	12/4/2018	VOCs	-
GS-SS-111-001-CDM	Soil	0-0.5	12/4/2018	Aroclors, SVOCs, and metals + Hg	-
GS-SS-111-003-CDM	Soil	1-1.5	12/4/2018	VOCs	PID reading: 132 ppm
GS-B-112-001-CDM	Soil	0-2	12/13/2018	Aroclors, SVOCs, and metals + Hg	-
GS-B-112-004-CDM	Soil	3-5	12/13/2018	VOCs	PID reading: 2.5 ppm
GS-B-106-004-CDM	Soil	3-5	12/13/2018	VOCs	PID reading: 0.8 ppm
GS-B-101-001-CDM	Soil	0-2	12/14/2018	Aroclors, SVOCs, and metals + Hg	-
GS-B-101-004-CDM	Soil	0-2	12/14/2018	VOCs	PID reading: 47 ppm
GS-B-102-001-CDM	Soil	0-2	12/17/2018	Aroclors, SVOCs, and metals + Hg	-
GS-B-102-002-CDM	Soil	2-4	12/17/2018	VOCs	PID reading: 15.6 ppm
GS-B-102-004-CDM	Soil	5.5-7.5	12/17/2018	Aroclors, SVOCs, and metals + Hg	-
GS-B-111-001-CDM	Soil	0-2	12/17/2018	Aroclors, SVOCs, and metals + Hg	-
GS-B-111-004-CDM	Soil	2-5	12/17/2018	VOCs	PID reading: 1,326 ppm
MW-10-CDM	Groundwater	2-7	12/20/2018	VOCs, SVOCs, pesticides, aroclors, and dissolved metals + Hg	-
MW-17-CDM	Groundwater	2.5-10	12/27/2018	VOCs, SVOCs, pesticides, aroclors, and dissolved metals + Hg	-

Acronyms:

Bgs: below ground surface

CDM: CDM Smith

Hg: mercury

ID: identification

PID: photoionization detector

ppm: parts per million

SVOCs: semi-volatile organic compounds

VOCs: volatile organic compounds

Attachment II

Daily Quality Control Reports

December 17, 2018 – January 4, 2019

Pierson's Creek Superfund Site, OU2

Remedial Investigation/Feasibility Study Oversight

Newark, New Jersey

Attachment II
Daily Quality Control Reports
December 17, 2018 – January 4, 2019
Pierson's Creek Superfund Site, OU2
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Newark, New Jersey

**Pierson's Creek Superfund Site OU2
Remedial Investigation/Feasibility Study Oversight
City of Newark, New Jersey
Daily Quality Control Report**

DATE: Friday, December 17, 2018

Contractors and Personnel Jeff Rakowski (JR) from CDM Smith;
Doug Mateas (DM), Matt Mray and Laura Pasquine from Geosyntec Consultants (GC);
Onsite: Summit Drilling (SD); Bill Reilly (BR) from Troy Chemical (TC).

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	0 to 32 ° F	32 to 50 ° F	50 to 70 ° F	70 to 85 ° F	85+ ° F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Daily Health and Safety Meeting Completed: PPE in use at Site includes hard hat, safety glasses, safety-toe boots, and hi-visibility vests.

Description of Field Activities

08:00: JR onsite.

08:10: JR meets with DM. JR requests that hand-augered locations with the most volume be split sampled. DM confirms that this is what he plans on doing.

09:10 JR completes Thursday's daily report.

09:30 JR prints out airbill for today's anticipated samples.

09:50 JR views hand-augering at GS-B-102.

09:55 JR takes photo of GS-B-102 location.

10:00 JR observes auger bucket being decontaminated with soap and water rinse between depths.

10:05 Hand-auger refusal is met at 4' bgs. Water level is 2'1" bgs.

10:15 Dual tube cores are collected to 9.5' bgs.

10:25 Drillers backfill GS-B-102 with grout.

10:32 GS-B-102-004 split sample accepted for VOCs from 66 to 90 inches bgs. Organic vapors were recorded as 15.6ppm from this depth. Organic vapors were higher from 102 to 114 inches bgs at 68.1ppm, but Geosyntec opted to collect the VOC sample from 66 to 90 inches bgs as this is where they believe the area of greatest impact is located.

10:45 JR accepts GS-B-102-002-CDM split sample (24-48 inches bgs) for Aroclors, semi-volatile organic compounds, and total metals + Hg.

11:45 JR accepts GS-B-111-001-CDM split sample (0-24 inches bgs) for Aroclors, semi-volatile organic compounds, and total metals + Hg.

12:05 GS-B-111-004 split sample accepted for VOCs from 24 to 60 inches bgs. The PID recorded organic vapors as 1,326ppm at this interval.

12:20 JR bags ice for sample shipment.

13:00 JR completes chain of custody in the Scribe database.

13:30 JR checks samples against the chain of custody and seals cooler.

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13:45 JR creates chain of custody, fedex airbill, and prints labels for the MW-17 split sample that is planned on being collected later this week.

14:45 JR meets with DM to discuss groundwater sampling event.

15:05 JR departs site to ship samples.

Split Sample Summary

Sample Identification	Depth Collected in inches (bgs)	Parameters Collected	Notes
GS-B-102-001-CDM	0-24	Aroclors, semi-volatile organic compounds, and total metals + Hg	
GS-B-102-004-CDM	66-90	Volatile organic compounds	PID 15.6ppm
GS-B-102-002-CDM	24-48	Aroclors, semi-volatile organic compounds, and total metals + Hg	
GS-B-111-001-CDM	0-24	Aroclors, semi-volatile organic compounds, and total metals + Hg	
GS-B-111-004-CDM	24-60	Volatile organic compounds	PID 1,326 ppm

Issues/Problems Encountered/Deficiencies/Deviations and Resolutions

1. Geosyntec is opting to collect their VOC samples based on visual observations (staining, fill) even when the PID recorded organic vapors were higher elsewhere in the interval. Section 4.2.2 (Supplemental Soil Boring Sampling) of the Geosyntec RI/FS workplan states the following which gives them some flexibility for selection of VOC sample intervals:

“Samples will generally be collected over 2-foot intervals, which will be selected based on visual observations and PID field screening results for VOCs only. One of the samples will be collected within the top two feet since facility workers are more likely to have direct contact with this interval. The second sample will be collected based on visual observation. In cases where obvious staining is not apparent, sample intervals will be biased toward historically high concentration intervals. The third sample will be collected within the top two feet of the meadow mat stratum to characterize it, if encountered.”

The observation above represents a change in focus, but it is not considered to be a deviation from the work plan or QAPP.

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See attached photos



12-17-18 – Decontamination of sampling equipment (hand-auger).

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12-17-2018 – Field Sampler verifying depth of borehole.

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DATE: Wednesday, December 19, 2018

Contractors and Personnel Emily Wong (EW) from CDM Smith;
Doug Mateas (DM) and Laura Pasquine (LP) from Geosyntec Consultants (GC); Bill Reilly
Onsite: (BR) from Troy Chemical (TC).

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	0 to 32 ° F	32 to 50 ° F	50 to 70 ° F	70 to 85 ° F	85+ ° F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Daily Health and Safety Meeting Completed: PPE in use at Site includes hard hat, safety glasses, safety-toe boots, and hi-visibility vests.

Description of Field Activities

07:20 EW onsite.

07:50 EW at Building 99 with GC crew as they calibrate equipment and prepare for the day.

08:30 GC crew complete all prep work and begin field activities. DM to develop GS-MW-102 and LP to sample MW-9. EW observes well purging at MW-9.

08:50 GC crew noticed immediately after turning on pump that there was a leak along the tubing. The pump was pulled out and the leak was found. GC replaces the tubing and continues with well purging.

10:45 EW at GS-MW-102 to observe well development. DM informs EW that well development has been slow due to large amounts of sediment in the groundwater. DM has been rinsing pump of sediment buildup when necessary so that development can continue.

11:30 Pump used to develop GS-MW-102 is no longer working. Multiple attempts to repair the pump have failed. DM to continue developing the well using check valve method.

11:50 MW-9 sample collected. LP to move onto sampling MW-2 after picking up additional supplies.

12:45 Development of GS-MW-102 complete for today. Approximately 40-45 gallons was purged. DM was instructed to continue developing the well tomorrow using a pump to reduce turbidity levels.

13:45 EW at MW-2. LP purging well.

14:15 DM begin setting up equipment at MW-3.

15:55 EW discusses tomorrow's sampling event with DM.

16:20 EW offsite. DM and LP continue purging wells MW-2 and MW-3.

Issues/Problems Encountered/Deficiencies/Deviations and Resolutions

1. A leak was detected along the tubing immediately after well purging began at MW-9. The pump was promptly pulled out, and the tubing was replaced.
2. Well development at GS-MW-102 was slow due to large amounts of sediment in the groundwater. The pump had to be rinsed off intermittently in order to continue development.
3. Well development at GS-MW-102 could not be completed due to pump failure. DM continued pumping using check valve method, however turbidity remained high. Development will be completed tomorrow using the driller's pump to lower turbidity readings.

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4. Approximately 2-2.5 hours was spent purging at each well prior to sampling. Turbidity readings would drop and stabilize temporarily before spiking up again. Due to the extended amount of time required to stabilize each well, only 3 sets of samples were collected today.

See attached photos



12-19-18 – Setup at GS-MW-102 after pump failure.

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12-19-2018 – Purging well at MW-2.

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DATE: Thursday, December 20, 2018

Contractors and Personnel Onsite: Emily Wong (EW) from CDM Smith; Doug Mateas (DM) and Laura Pasquine (LP) from Geosyntec Consultants (GC); Summit Drilling (SD); Bill Reilly (BR) from Troy Chemical (TC).

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	0 to 32 ° F	32 to 50 ° F	50 to 70 ° F	70 to 85 ° F	85+ ° F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Daily Health and Safety Meeting Completed: PPE in use at Site includes hard hat, safety glasses, safety-toe boots, and hi-visibility vests.

Description of Field Activities

08:00 EW arrives onsite. GC onsite at Building 99 prepping for field activities.

08:15 SD arrives onsite.

08:30 EW discusses field activities for the day with DM. Split samples will be collected at MW-10. LP begins setting up at MW-10. SD and DM will work on well repairs and locating 2 existing wells that were paved over previously, once access clearance is received from BR.

09:15 EW completes daily quality control report for oversight activities performed on 12/19/18.

09:30 SD begins well repair activities on MW-1.

10:45 MW-10 has stabilized after approximately 2 hours of purging. GC starts sample collection.

11:15 Well repair for MW-1 has been completed.

11:45 DM starts setting up equipment on MW-7 for well purging and sampling.

12:30 MW-10 sample collection is completed. EW accepts split sample. EW to finish packing coolers.

14:30 LP collects samples for MW-7.

15:00 SD completes well repair for MW-17 and locates 1 of 2 wells that were paved over. SD and DM attempt to locate second well.

16:00 DM developing GS-MW-102 using pump. EW discusses field events for the day and requests final water quality readings and measurements for GS-MW-102 when available.

16:15 EW departs site to drop off coolers at FedEx shipping center.

16:45 Two coolers dropped off at shipping center. All work complete.

Split Sample Summary

<i>Sample Identification</i>	<i>Screen Interval (bgs)</i>	<i>Parameters Collected</i>	<i>Notes</i>
MW-10-CDM	2 to 7	Volatile organic compounds, semi-volatile organic compounds, pesticides, aroclors, and dissolved metals + Hg	

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Issues/Problems Encountered/Deficiencies/Deviations and Resolutions

1. Approximately 2-2.5 hours were spent purging at each well prior to sampling. Turbidity readings would drop and stabilize temporarily before spiking up again. Due to the extended amount of time required to stabilize each well, only 2 sets of samples were collected today.

See attached photos



12-20-18 – Well repair completed at MW-1.

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12-20-2018 – Collecting split samples at MW-10.



12-20-2018 – Developing GS-MW-102.

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DATE: Thursday, December 27, 2018

Contractors and Personnel Jeffrey Rakowski (JR) from CDM Smith;
Rachel Gross (RG), Jessica Evans (JE), Trevor Murray (TM) from Geosyntec Consultants
Onsite: (GC); Bill Reilly (BR) from Troy Chemical (TC).

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	0 to 32 ° F	32 to 50 ° F	50 to 70 ° F	70 to 85 ° F	85+ ° F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Daily Health and Safety Meeting Completed: PPE in use at Site includes hard hat, safety glasses, safety-toe boots, and hi-visibility vests.

Description of Field Activities

07:50 JR arrives onsite and awaits GC to open Building 99.

08:35 GC open up Building 99.

08:45 JR labels MW-17 bottle-ware for today's split sample.

09:00 JR bags ice for today's split sample shipment.

09:10 GC are calibrating water quality meters and air monitoring equipment.

09:40 JR takes picture of flooding of Welch and Holmes property.

10:00 GC bring over all equipment to MW-17 in order to start purging the well.

10:15 Depth to water at MW-17 before the pump is started is 3.05 feet, which was measured from the top of the inner casing.

10:20 Purging begins on MW-17 (Bladder pump has been set to a depth of 8.25 feet below ground surface).

11:00 MW-17-CDM split sample collection time.

11:20 JR questions why JE is collecting a sample for total mercury as this is not what is listed in their QAPP. JE tells JR that the laboratory had it listed and provided the bottle-ware. JE calls RG which informs her that she believes this was a mistake by the laboratory, but to collect it and will keep it on hold until they figure this out.

12:00 GC completes sampling at MW-17 and brings back equipment and samples for decontamination and storage respectively.

13:00 JR checks MW-17-CDM split sample against chain of custody

13:25 JR bags additional ice for cooler.

14:05 JR seals cooler.

14:25 JR meets with JE who has completed sampling at MW-13. TM has completed sampling at MW-6 and MW-6D.

14:30 TM brings equipment and samples back from MW-6D.

14:40 JE performs calibration check on water quality equipment

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14:50 JR informs RG and JE of GC that he did not see samples placed on ice. RG says that the laboratory will be bringing ice for samples when they arrive shortly for pickup.

15:00 JR confirms that GC will be onsite Friday, January 4th to sample the newly installed shallow groundwater monitoring wells.

15:05 Alpha laboratories pick up samples from GC.

15:20 JR departs site.

Split Sample Summary

<i>Sample Identification</i>	<i>Screen Interval (Bgs)</i>	<i>Parameters Collected</i>	<i>Notes</i>
MW-17-CDM	2.5 to 10	Volatile organic compounds, semi-volatile organic compounds, pesticides, aroclors, and dissolved metals + Hg	

Issues/Problems Encountered/Deficiencies/Deviations and Resolutions

1. GC did place ice on samples throughout the day. JR talked to GC about this and was informed that ice was being brought during sample pickup which occurred at 15:05.

Based on the temperature range during working hours of 36 to 44 degrees Fahrenheit (°F) and the final reading at MW-17 recorded as 60.40 °F, it is believed that GC samples collected throughout the day likely exceeded the required 32 to 39.2 °F temperature range. CDM Smith's samples were kept on ice immediately after collection.

2. In addition to GC analyses to be collected for groundwater sampling that are listed in their QAPP, they opted to collect a sample for total mercury as their laboratory had it listed and provided a bottle for it. It will be kept on hold at the laboratory for now.

See attached photos



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12-27-18 – Flooding Remains at Welch and Holmes.**



12-27-2018 – Groundwater sampling setup MW-17.



12-27-2018 – Turbidity being tested at MW-17.

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DATE: Friday, January 4, 2019

Contractors and Personnel Emily Wong (EW) from CDM Smith;
Rachel Gross (RG), Emily Ockert (EO) from Geosyntec Consultants (GC); Bill Reilly (BR)
Onsite: from Troy Chemical (TC).

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	0 to 32 ° F	32 to 50 ° F	50 to 70 ° F	70 to 85 ° F	85+ ° F
Wind	Still	Moderate	High		
Humidity	Dry	Moderate	Humid		

Daily Health and Safety Meeting Completed: PPE in use at Site includes hard hat, safety glasses, safety-toe boots, and hi-visibility vests.

Description of Field Activities

07:45 EW arrives onsite. RG attempting to contact BR to obtain access to Building 99.

08:00 EW and RG walk through plant to enter Building 99. GC crew begin preparing for the day and calibrate YSI and NTU meters.

08:30 GC crew begin setting up equipment at GS-MW-102.

09:00 EO collects depth to water measurement and begins pumping GS-MW-102 using MicroPurge bladder pump.

09:45 RG informs EW that her team has been collecting water level measurements from marked points at the top of inner casing to avoid past inconsistencies in water level measurements. RG will collect synoptic water levels today, on all monitoring wells from the marked points. EW discusses placing samples on ice with RG. RG informs EW that ice will be placed on the samples later today.

10:00 EO begins sampling GS-MW-102, after water quality parameters have stabilized.

10:30 EO completes sampling GS-MW-102 and begins packing equipment.

11:00 EO begins setting up at GS-MW-104.

11:15 EO observes air bubbles in the tubing at GS-MW-104. Pumping is temporarily stopped and EO pulls out the pump to confirm there are no problems with the pump and all connections are secure. EO suggests the air bubbles are due to the concentration of sediment within the groundwater.

12:30 Water quality measurements at GS-MW-104 have stabilized, and bubbles are no longer present in the tubing. EO begins collecting samples.

12:45 EW observes that pumps are not being decontaminated after each use. EO informs EW that there are 3 bladder pumps onsite which will be decontaminated at the end of the day, since they are sampling 3 wells today. EO and RG begin moving equipment to GS-MW-103.

14:00 EO takes depth to water measurement and begins purging GS-MW-103. EO confirms that the samples have been placed on ice within the last hour.

15:10 EO begins sample collection of GS-MW-103.

15:30 EO completes sample collection and begins packing equipment. RG informs EW that Chris Greene of Geosyntec has decided to include total mercury as an additional sample despite it not being included in the Work Plan.

**Pierson's Creek Superfund Site OU2
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City of Newark, New Jersey
Daily Quality Control Report**

16:00 EW departs site.

Issues/Problems Encountered/Deficiencies/Deviations and Resolutions

1. GC collected water levels from the top of inner casing at all monitoring well locations during sample collection and synoptic water levels. The exact locations were marked for future consistency and monitoring well survey points.
2. Samples were not placed on ice immediately after collection of GS-MW-102 and GS-MW-104. Ice was placed on these samples between 13:00 and 14:00.
3. Air bubbles were observed in the purge water by EO at GS-MW-104. The pump was promptly pulled out and examined. No air bubbles were present during sample collection.
4. GC collected a total mercury sample at each monitoring well location sampled today, as directed by Chris Greene, despite not listed for collection in the work plan and the QAPP.

See attached photos



1-4-2019 – YSI meter removed and emptied after water quality parameters stabilized.

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1-4-2019 – Depth to water measurement location marked on inner casing.



1-4-2019 – RG measuring depth to water over marked location.

Attachment III

Photographic Documentation

December 17, 2018 – January 4, 2019

Pierson's Creek Superfund Site, OU2

Remedial Investigation/Feasibility Study Oversight

Newark, New Jersey

Attachment III
Photographic Documentation
December 17, 2018 – January 4, 2019
Pierson's Creek Superfund Site, OU2
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12/17/18:
Decontamination of
sampling equipment
(hand auger).



12/17/18: Field sampler
verifying depth of
borehole.



Attachment III
Photographic Documentation
December 17, 2018 – January 4, 2019
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12/19/18: Purging well
at MW-2.



12/19/18: Setup at GS-
MW-102 after pump
failure.



Attachment III
Photographic Documentation
December 17, 2018 – January 4, 2019
Pierson's Creek Superfund Site, OU2
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12/20/18: One of two missing wells located by Summit Drilling crew.



12/20/18: Attempting to locate second missing well.



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12/20/18: Developing
GS-MW-102 using
pump.

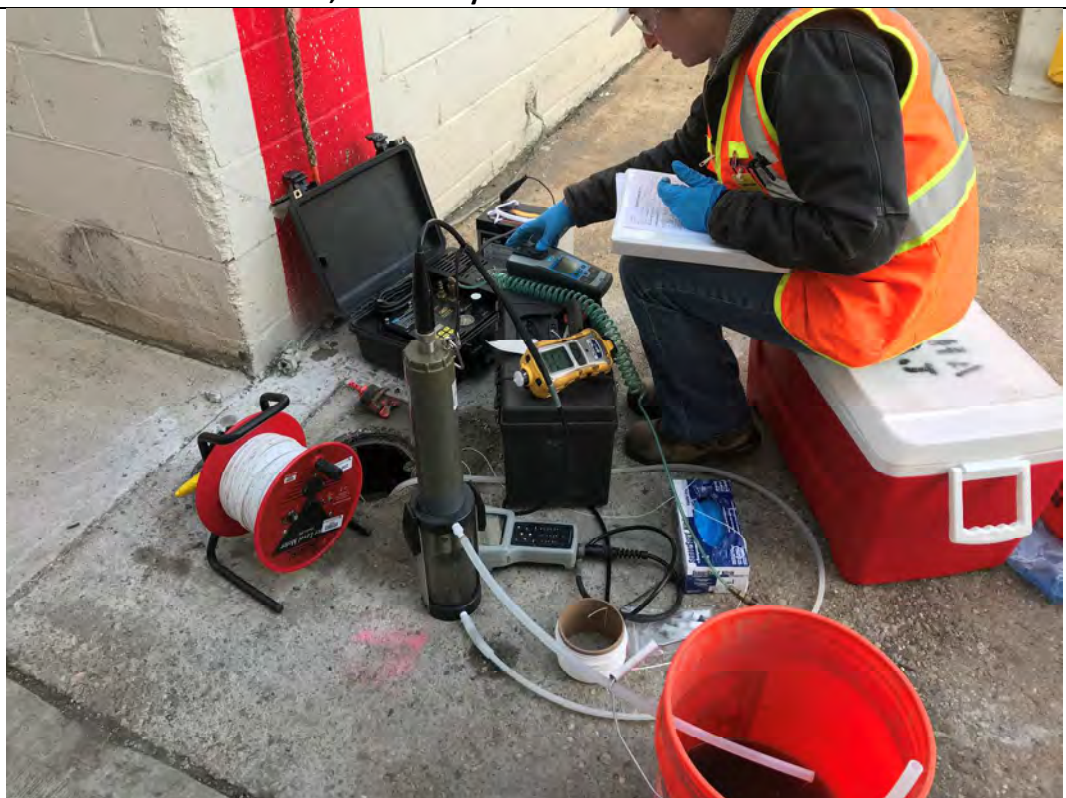


12/20/18: Summit
Drilling crew completes
repairing MW-1.



Attachment III
Photographic Documentation
December 17, 2018 – January 4, 2019
Pierson's Creek Superfund Site, OU2
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12/20/18: Begin purging
MW-10 prior to
sampling.



12/20/18: Collecting
split samples at MW-10.



Attachment III
Photographic Documentation
December 17, 2018 – January 4, 2019
Pierson's Creek Superfund Site, OU2
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12/27/18: Flooding
remains at Welch and
Holmes.



12/27/18: Groundwater
sampling setup at MW-
17.



12/27/18: Turbidity
being tested at MW-17.



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1/4/19: Disconnected and emptying YSI meter prior to sample collection.



1/4/19: Marking the location the depth to water measurement.



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1/4/19: Collecting depth
to water measurement
over the marked
location.

